Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (currently amended) A freeze-drying microscope stage for screening an array of samples to identify processing parameters for freeze-drying, wherein the array comprises at least 24 samples, the freeze-drying microscope stage comprises:

(a) at least one lyophilization plate comprising a plurality of stacked optically clear layers;

(b) a plurality of chambers in said at least one lyophilization plate;

(c) at least one pressure and temperature controlled chamber having optically clear windows; and

(d) heating, cooling, and pressure controls connected to the freeze-drying microscope stage.

2 (currently amended) The freeze-drying microscope stage of claim 1, wherein said~~the~~ pressure controls enable providing a first pressure to a first sample in the array of samples and a second pressure to a second sample in the array of samples.

3 (currently amended) The freeze-drying microscope stage of claim 2, wherein said~~the~~ first pressure is not equal to said second pressure.

4 (currently amended) The freeze-drying microscope stage of claim 1, wherein said~~the~~ heating and cooling controls provide a first temperature to a first sample in the array of samples and a second temperature to a second sample in the array of samples.

5 (currently amended) The freeze-drying microscope stage of claim 4, wherein said~~the~~ first temperature is not equal to said second temperature.

6 (currently amended) The freeze-drying microscope stage of claim 5, wherein saidthe heating and cooling controls enable controlling a temperature of one or more samples of the array of samples.

7 (currently amended) The freeze-drying microscope stage of claim 1, wherein saidthe heating controls enable providing heat to a surface of one or more selected samples in the array of samples.

8 (currently amended) The freeze-drying microscope stage of claim 1, wherein saidthe heating controls provide volumetric heating to one or more selected samples in the array of samples.

9 (original) The freeze-drying microscope stage of claim 6, wherein a plurality of samples in the array of samples, each sample comprising a freeze-dried fraction of a common initial formulation, correspond respectively to a plurality of temperatures which enable a determination of a glass transition temperature of the freeze-dried fraction by observing flow of the freeze-dried fraction.

10 (original) The freeze-drying microscope stage of claim 6, wherein a plurality of samples in the array of samples are respectively maintained at a plurality of pressures whereby enabling identification of a first pressure from the plurality of pressures corresponding to a sample in the array of samples exhibiting a desired rate of freeze-drying.

11 (original) The freeze-drying microscope stage of claim 9, wherein a structure of each of the plurality of samples in the array of samples is examined before a freeze-drying cycle.

12 (original) The freeze-drying microscope stage of claim 9, wherein a structure of each of the plurality of samples in the array of samples is examined during a freeze-drying cycle.

13 (original) The freeze-drying microscope stage of claim 9, wherein a structure of each of the plurality of samples in the array of samples is examined after a freeze-drying cycle.

14 (original) The freeze-drying microscope stage of claim 6, wherein a plurality of samples in the array of samples comprise a formulation maintained at varying temperatures by the temperature control to determine a glass transition temperature of the formulation.

15 (original) The freeze-drying microscope stage of claim 6, wherein a plurality of samples in the array of samples comprise a formulation maintained at varying temperatures by the temperature control to determine a sublimation rate of the formulation.

16 (original) The freeze-drying microscope stage of claim 6, wherein a plurality of samples in the array of samples comprise a formulation are monitored to determine a moisture content of at least one sample in the plurality of samples.

Claims 17- 40 (canceled)

41 (currently amended) A method of screening an array of samples for evaluating suitability for freeze-drying, comprising:

(a) preparing at least 24 samples to form the array of samples, wherein at least two samples comprise a lyophilizable solvent;

(b) freezing a plurality of samples in the array of samples;

(c) subjecting the plurality of samples to a freeze-thaw cycle by thawing and refreezing;

(d) subjecting the plurality of samples to a pressure in the range defined by at least 50 micrometers of Hg to no more than 760 millimeters of Hg; and

(e) examining, visually, at least one sample in the plurality of samples to determine if the temperature has exceeded the glass transition temperature for the sample.

42 (original) The method of claim 41, further comprising the step of freezing a sample by supercooling.

43 (currently amended) The method of claim 42, further comprising the step of annealing the frozen sample by warming to about or below the melting point of the lyophilizable solvent for a ~~first~~ duration of time.

44 (currently amended) The method of claim 43, wherein the step of annealing includes warming to no more than five degrees C below the melting point of the lyophilizable solvent for a~~the first~~duration of time.

45 (currently amended) The method of claim 43, wherein the step of annealing includes warming to no more than two degrees C below the melting point of the lyophilizable solvent for a~~the first~~ duration of time.

Claims 46-59 (canceled)